



WEAR CHECK

OIL ANALYSIS REPORT

| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
46632
 Component
Diesel Engine
 Fluid
{not provided} (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | WC0946095 | WC0871974 | --- |
| Sample Date | | Client Info | | 07 Jun 2024 | 11 Jan 2024 | --- |
| Machine Age | mls | Client Info | | 75250 | 29009 | --- |
| Oil Age | mls | Client Info | | 42000 | 29009 | --- |
| Filter Age | mls | Client Info | | 42000 | 29009 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >100 | 50 | 84 | --- |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 2 | --- |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | --- |
| Silver | ppm | ASTM D5185m | >3 | <1 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 17 | 45 | --- |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >330 | 186 | 215 | --- |
| Tin | ppm | ASTM D5185m | >15 | 2 | 3 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

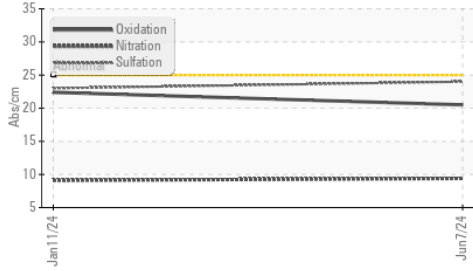
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >25 | 8 | 8 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 42 | 127 | --- |
| Fuel | % | ASTM D3524 | >5 | <1.0 | 0.1 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.9 | 0.6 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.4 | 9.1 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.0 | 23.0 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | --- |

FLUID CONDITION

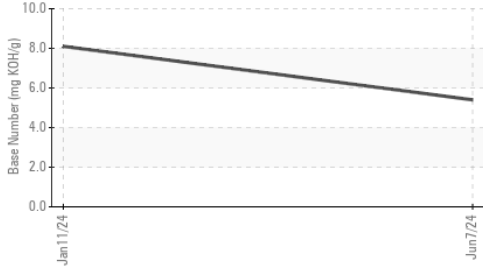
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|-----|-------------|------|-----|
| Sodium | ppm | ASTM D5185m | | 4 | 0 | --- |
| Boron | ppm | ASTM D5185m | | 101 | 31 | --- |
| Barium | ppm | ASTM D5185m | | 0 | 4 | --- |
| Molybdenum | ppm | ASTM D5185m | | 87 | 42 | --- |
| Manganese | ppm | ASTM D5185m | | 2 | 4 | --- |
| Magnesium | ppm | ASTM D5185m | | 421 | 514 | --- |
| Calcium | ppm | ASTM D5185m | | 1512 | 1683 | --- |
| Phosphorus | ppm | ASTM D5185m | | 975 | 734 | --- |
| Zinc | ppm | ASTM D5185m | | 1213 | 903 | --- |
| Sulfur | ppm | ASTM D5185m | | 2688 | 2331 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.5 | 22.4 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 5.4 | 8.1 | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 12.1 | 9.8 | --- |

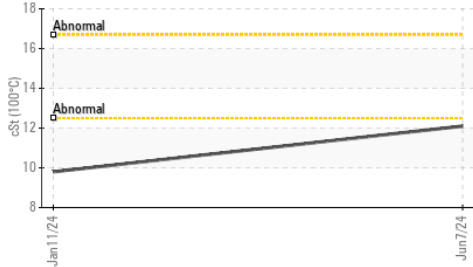
FT-IR (Direct Trend)



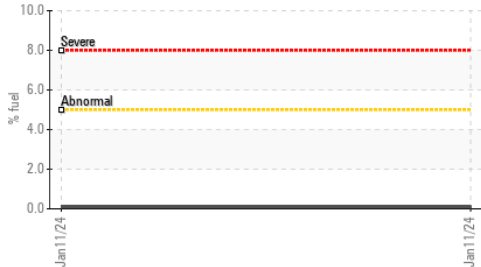
Base Number



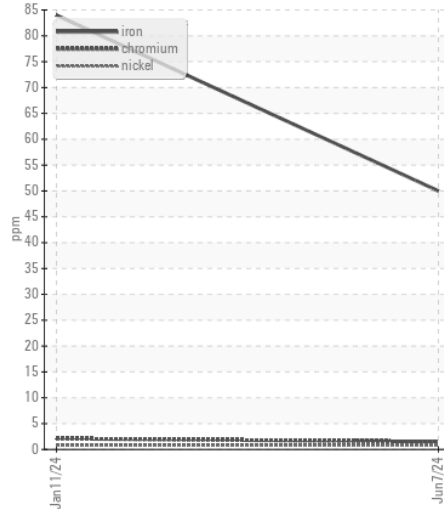
Viscosity @ 100°C



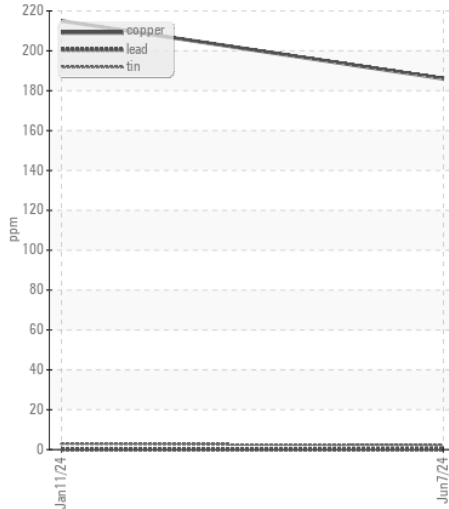
Fuel Dilution



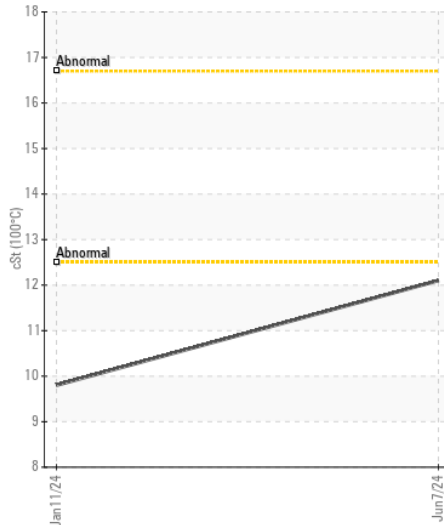
Ferrous Alloys



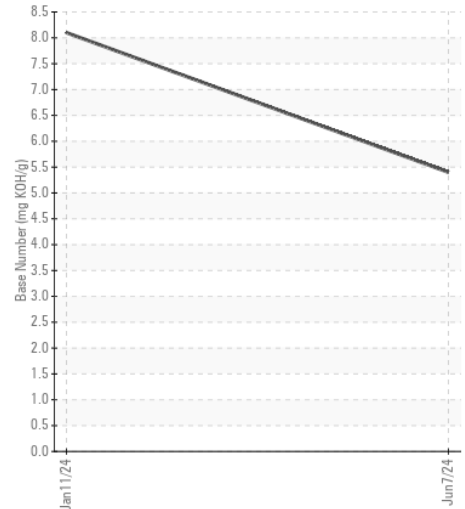
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0946095 **Received** : 21 Jun 2024
Lab Number : 06217519 **Tested** : 25 Jun 2024
Unique Number : 11090383 **Diagnosed** : 25 Jun 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

SALEM NATIONALEASE CORPORATION
 198 PARK PLAZA DRIVE
 WINSTON SALEM, NC
 US 27105
 Contact: Audrey Hopkins
 Audrey.Hopkins@salemcorp.com
 T: (336)767-9642
 F: x:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)